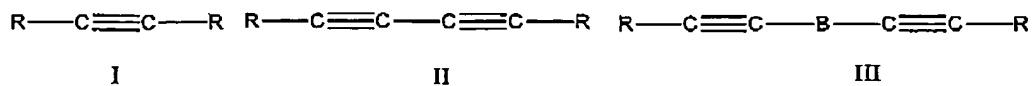


Application No.: 10/722304  
 Docket No.: CL2242USNA

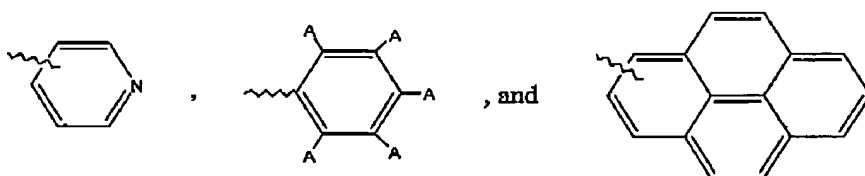
Page 3

Amendments to Claims

**Claim 1 (Currently Amended)** A conducting molecule according to Formula I, ~~II, or III:~~

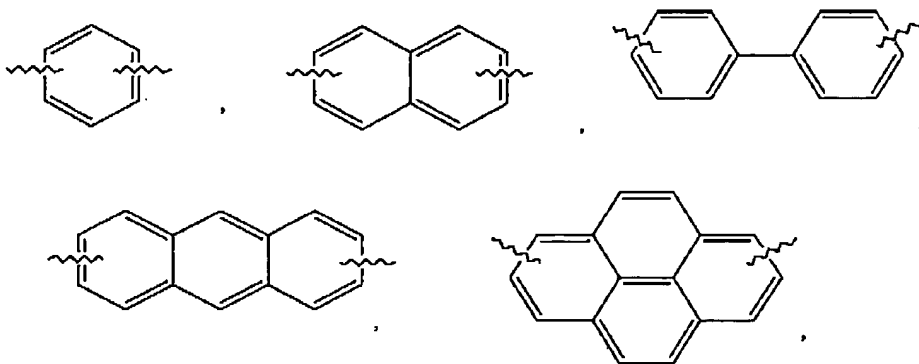


wherein R is independently selected from the group consisting of:



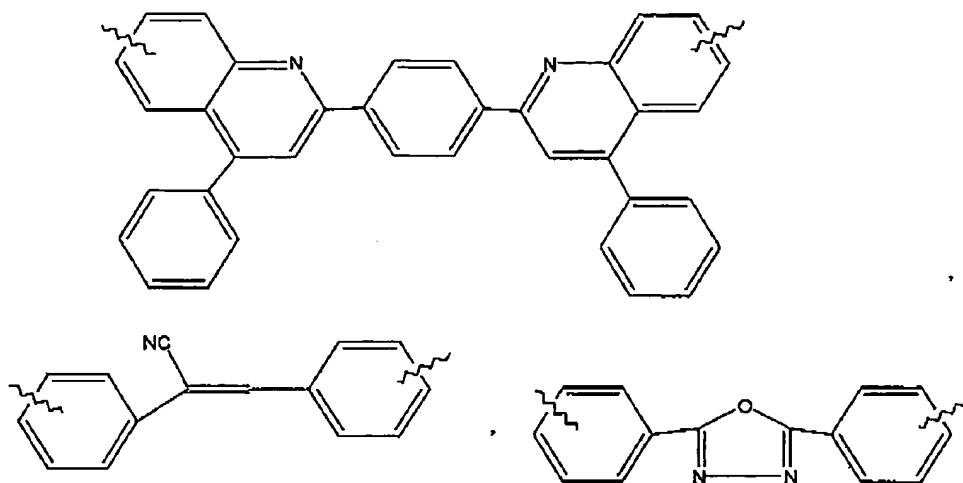
wherein A is independently selected from the group consisting of H, a C1-C6 alkyl group, F, -CN, and -S-C(=O)-CH<sub>3</sub>, wherein at least one of F, -CN, and -S-C(=O)-CH<sub>3</sub> is present;

and B is selected from the group consisting of:

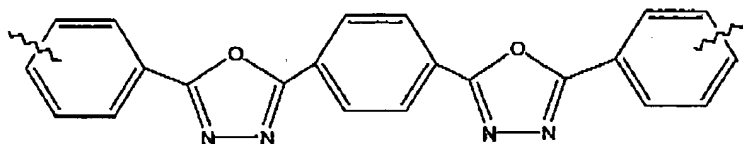


Application No.: 10/722304  
Docket No.: CL2242USNA

Page 4



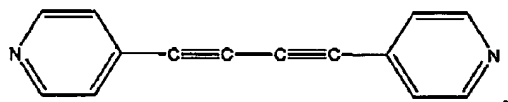
and



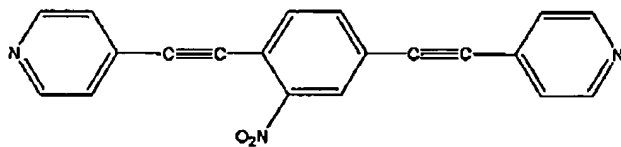
wherein B is optionally substituted with H, a C1-C6 alkyl group, F, -CN, -NO<sub>2</sub>, and -S-C(=O)-CH<sub>3</sub>.

**Claim 2 (Original)** A conducting molecule according to Claim 1 selected from the group consisting of:

(a)



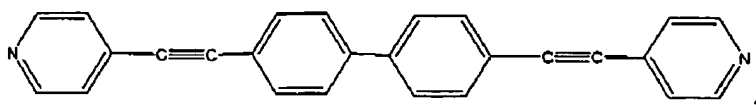
(b)



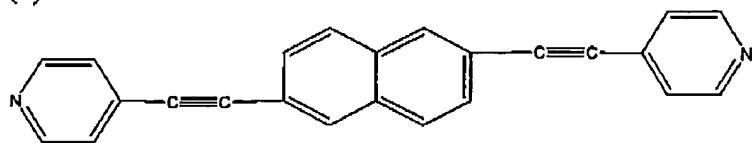
Application No.: 10/722304  
Docket No.: CL2242USNA

Page 5

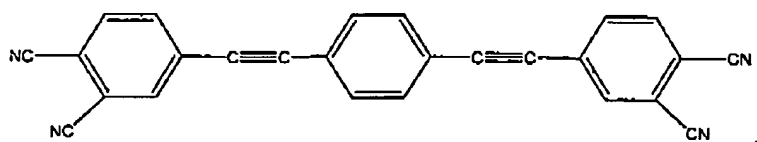
(c)



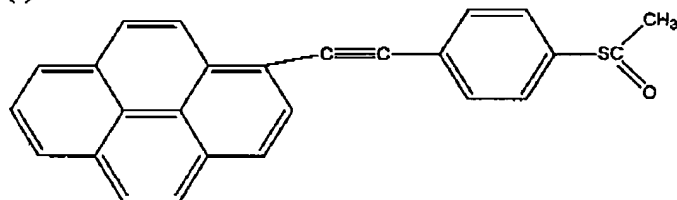
(d)



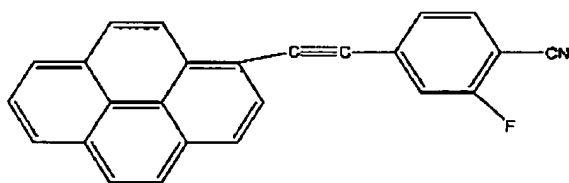
(e)



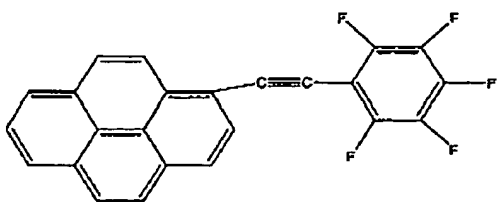
(f)



(g)



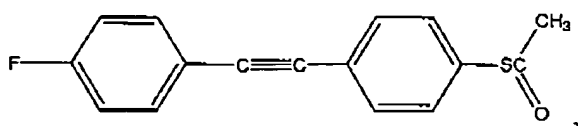
(h)



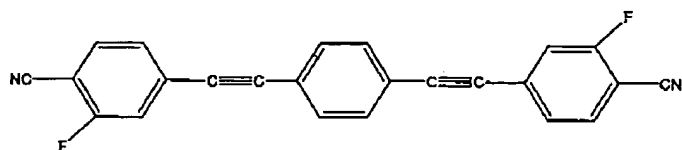
Application No.: 10/722304  
Docket No.: CL2242USNA

Page 6

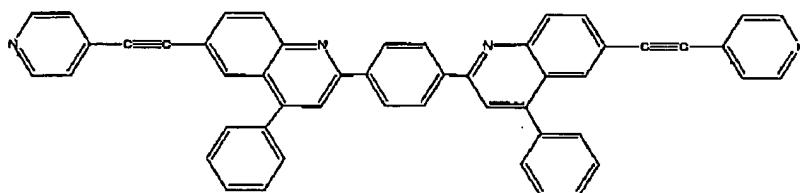
(i)



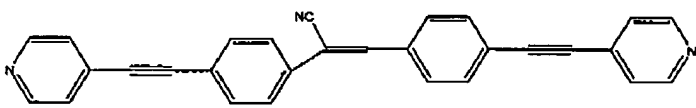
(j)



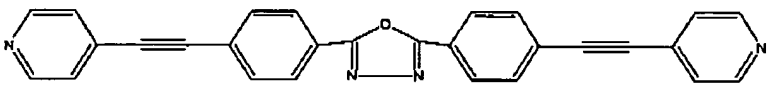
(k)



(l)

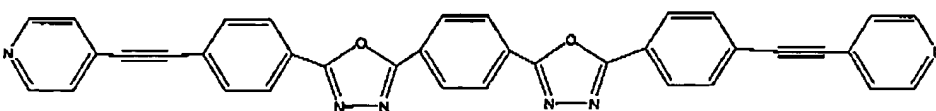


(m)



and

(n)



Application No.: 10/722304  
Docket No.: CL2242USNA

Page 7

**Claim 3 (Withdrawn)** A molecular based memory system, molecular wire, or molecular switch, comprising a composition or either of Claim 1 or Claim 2.

**Claim 4 (Withdrawn)** A process for synthesizing a supramolecular structure comprising the steps of:

- (a) providing a conducting molecule of any of Claims 1 or 2;
- (b) providing a suitable substrate;
- (c) contacting the conducting molecule of (a) with the substrate of (b) wherein the conducting molecule is immobilized on the substrate;
- (d) contacting the immobilized conducting molecule of (c) with a redox or photochemical reagent under conditions wherein the immobilized conducting molecule is activated; and
- (e) contacting the activated conducting molecule with the conducting molecule of step (a) wherein molecular addition takes place and a supramolecular structure is formed.

**Claim 5 (Withdrawn)** A process according to Claim 4 wherein steps (d) and (e) are optionally repeated.

**Claim 6 (Withdrawn)** A process according to Claim 4 wherein the substrate is selected from the group consisting of silicon wafers, synthetic polymer supports, glass, agarose, nitrocellulose, nylon, nickel grids or disks, carbon supports, aminosilane-treated silica, polylysine coated glass, mica, and semiconductors.

**Claim 7 (Withdrawn)** A supramolecular structure synthesized by the process of Claim 4.

**Claim 8 (Withdrawn)** A sensor comprising a supramolecular structure synthesized by the process of Claim 4.